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DRAWINGS ATTACHED

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(54) IMPROVEMENTS IN PATIENTS TROLLEYS

(71) We, HOSKINS & SEWELL LIMITED, a British Company, of Neptune Works, Upper Trinity Street, Birmingham, 9, in the County of Warwick, do hereby declare the invention for which we pray that a patent may be granted to us and the method by which it is to be performed to be particularly described in and by the following statement:

This invention relates to patients' trolleys which are adapted to carry a holder for an X-ray film cassette.

Such trolleys comprise a framework body on which is carried a generally flat and usually horizontal, platform. This platform is in the form of two parallel spaced apart members, the uppermost of these members is transparent to X-rays and supports the patient whilst the lowermost is generally referred to as the false top and is adapted to carry an X-ray cassette holder. The generally flat platform may be so mounted upon the framework body that it may be tilted relative to the framework body to enable the orientation of the patient to be varied. In addition, the generally flat platform may be made in two sections so that one section can provide a shoulder rest for the patient if desired so that the patient can be supported in a semi-reclining position.

The X-ray cassette holder must be movable, between the false top and the patient supporting platform over the whole surface of the trolley so that an X-ray photograph can be taken of any desired part of the patient's body.

Hitherto a relatively complicated arrangement of ratchets and cogs, rails, friction clamps or inter-engaging pins and holes have been used to secure the X-ray cassette holder to the framework. These previous methods are untidy in use, are dust collectors and are relatively expensive.

It is accordingly an object of the present invention to provide a patients' trolley and X-ray cassette holder in which the above mentioned disadvantages are overcome or are reduced.

The invention is a patient's trolley having a patient-supporting platform and an X-ray cassette holder adjustably mounted on the trolley beneath said platform, either said cassette holder or said trolley being provided with a magnet and the trolley, or the cassette holder, respectively being provided with a magnetically susceptible material so that the cassette holder may be moved relative to the trolley to a desired position and be held in said position by the attractive force between said magnet and the material.

The holder may be provided with the magnet and the trolley with said material.

The magnet may be a permanent magnet.

The material may be a strip extending longitudinally of the trolley beneath the patient-supporting platform.

The trolley may be provided with a false top, that is a platform parallel to and spaced apart from and below the patient-supporting platform and the strip may be provided on said false top.

The strip may be positioned so as to extend longitudinally of the middle of the false top.

The strip may be made of a ferrous material.

The patient-supporting platform and false top may each be made in two mutually pivoted sections so that one section of the platform may provide a shoulder support for a patient and the strip may also be formed in two parts, one part being provided on each section of the false top.

The cassette holder may be provided with a magnet at each of two opposite ends thereof, the magnets may be mounted on the cassette holder in "floating" manner so as to ensure good alignment of the magnets with said strip.

The magnets may be of generally parallelopiped configuration and each may be a

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loose fit within a similarly shaped cage provided on the cassette holder.

Another aspect of the invention is a patient's trolley having a patient-supporting platform and a false top positioned below the patient supports platform and in spaced relationship thereto, the false top being provided with a strip of magnetised or magnetically susceptible material, said strip extending longitudinally of the middle of the false top and said strip being adapted to be engaged by a magnetically susceptible material, or a magnet, respectively provided on an X-ray cassette holder adapted to be positioned on the trolley between the patient-supporting platform and the false top.

A patient's trolley embodying the invention will now be described in more detail by way of example with reference to the accompanying drawings wherein:—

FIGURE 1 is a perspective view of a trolley acording to the invention,

FIGURE 2 is a plan view of a cassette holder for use in the trolley of Figure 1, and

FIGURE 3 is an end elevation of the cassette holder of Figure 2.

Referring to the figures, Figure 1 shows a trolley which comprises a conventional framework body 11 mounted on castors 12.

At the top of the framework body 11 an intermediate frame 13 is pivoted to the framework and the intermediate frame 13 carries a false top 14 which is a generally flat platform and mounted on the false top 14 and spaced above the false top 14 is a patient-supporting platform 15. The patient-supporting platform is transparent to X-rays. The false top 14 may be formed in two sections 14*a* and 14*b* and the patient-supporting platform 15 carried thereby is also formed in two sections 15*a* and 15*b*. One pair (14*b* and 15*b*) of these sections is pivotally connected to the intermediate frame 13 to enable these sections (14*b*, 15*b*) to pivot relative to the other sections (14*a* and 15*a*) so as to provide a shoulder rest for the patient to enable X-rays to be taken with the patient in a semi-reclining position.

In addition, because the whole intermediate frame 13 is pivotally connected to the framework body 11, X-ray photographs may be taken of the patient with the patient in differing orientations relative to the horizontal.

The trolley described hereinbefore is of conventional construction and hence the above description is brief and is only included so as to facilitate a full understanding of the invention.

The false top 14 has a strip of metal 16 provided thereon extending along the middle of the false top 14 parallel to the longer-sides thereof. The strip 16 is made of mild steel.

A cassette holder 17 for use with the trolley is shown in Figs. 2 and 3 and has conventional cassette engaging and adjusting parts, indicated generally at 18, and is provided with two permanent magnets 19, one at each end of the cassette holder. The magnets 19 are of rectangular parallelopiped form and are held in cages 20 provided on the cassette holder 17. The dimensions of the magnets 19 are such that they are loose fits in their cages 20 so that the magnets 19 may "float" relative to the cages 20 to ensure good alignment of each magnet with the metal strip 16 on the false top 14 of the trolley.

In use, the cassette holder is engaged between the false top 14 and the patient-supporting platform 15 and the cassette holder is slid longitudinally of the false top 14 to a desired position and when it is in the desired position it is maintained in this position as a result of the attraction between the metal strip and the magnet 19.

This attractive force also locates the cassette holder when either the false top 14 is inclined, as a result of tilting of the intermediate frame 13, or when the holder is on the section 14*b* of the false top when the section 14*b* is in an inclined position.

It will be appreciated that adjustment of the cassette holder to the desired position and securing in this position is very simple as compared with previous arrangements because no separate securing operation is required. It will also be appreciated that relatively few parts need to be provided to secure the cassette holder to the framework hence making the trolley more economical to manufacture. In addition, it is very easy to keep these parts of the trolley clean which is an important feature in hospital apparatus.

If desired, the strip could be made of magnetic material and the cassette holder provided with magnetically susceptible material.

WHAT WE CLAIM IS:—

1. A patient's trolley having a patient-supporting platform and an X-ray cassette holder adjustably mounted on said trolley beneath said platform, either said cassette holder or the trolley being provided with a magnet and the trolley, or the cassette holder, respectively being provided with a magnetically susceptible material so that the cassette holder may be moved relative to the trolley to a desired position and held in said position by the attractive force between said magnet and material.

2. A trolley according to Claim 1 wherein the magnet is a permanent magnet.

3. A trolley according to Claim 1 or Claim 2 wherein the holder is provided with the magnet and the trolley with said material.

4. A trolley according to Claim 3 wherein the material is a strip extending longitudinally of the trolley beneath the patient-supporting platform.

5. A trolley according to Claim 4 wherein the trolley is provided with a false top, and wherein said strip is provided on said false top.

6. A trolley according to Claim 5 wherein the strip is positioned so as to extend longitudinally of the middle of the false top.

7. A trolley according to Claim 5 or Claim 6 wherein the patient-supporting platform and false top are each made in two mutually pivoted sections so that one section of the platform can provide a shoulder support for a patient and wherein said strip is also formed in two parts, one part being provided on each section of the false top.

8. A trolley according to any preceding claim wherein the strip is made of a ferrous material.

9. A trolley according to Claim 3 or any one of Claims 4 to 8 when dependent upon Claim 3, wherein the cassette holder is provided with a magnet at each of two opposite ends thereof.

10. A trolley according to Claim 9, wherein the magnets are mounted on the cassette holder in floating manner to ensure good alignment of the magnets with the strip.

11. A trolley according to Claim 10, wherein the magnets are a loose fit within cages provided on the cassette holder.

12. A trolley according to Claim 11, wherein the magnets are of generally parallelopiped configuration.

13. A patient's trolley having a patient-supporting platform and a false top positioned below the patient-supporting platform and in spaced apart relationship thereto, the false top being provided with a strip of magnetised, or magnetically susceptible material, said strip extending longitudinally of the middle of the false top and said strip being adapted to be engaged by a magnetically susceptible material, or a magnet, respectively provided on an X-ray cassette holder adapted to be positioned on the trolley between the patient-supporting platform and the false top.

14. A trolley and cassette holder substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

15. A trolley for use with an X-ray cassette holder substantially as hereinbefore described with reference to and as shown in Figure 1 of the accompanying drawings.

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1,200,814 COMPLETE SPECIFICATION
1 SHEET

This drawing is a reproduction of the Original on a reduced scale.

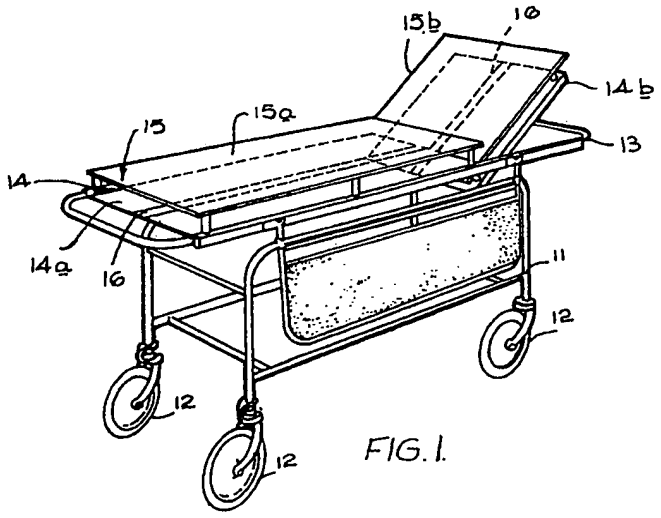

FIG. 1.

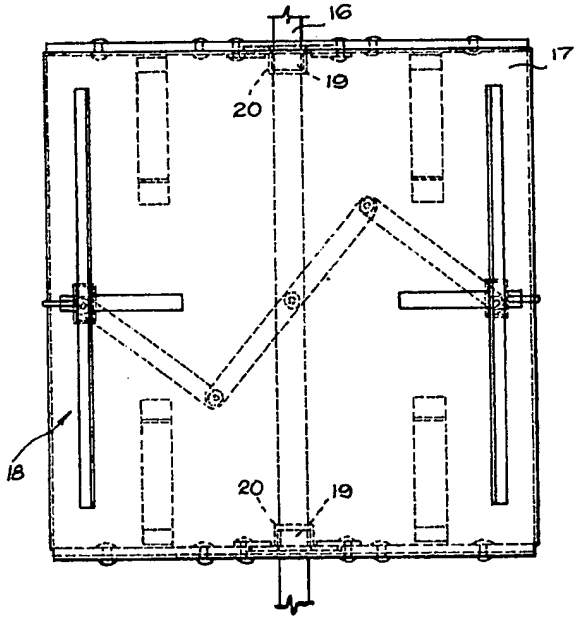

FIG. 2.

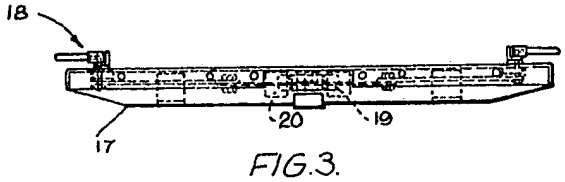

FIG. 3.